display a photographic mat on display panel 19.

At step S4-29, the customer processing apparatus displays to the user on display 14 the alignment instructions sent from the processing apparatus 6 defining how the subject object should be positioned on the photographic mat.

Having printed or displayed the photographic mat, the subject object (or objects) for which a 3D computer model is to be generated, is placed in the blank centre portion of the photographic mat, so that the object is surrounded by the pattern of features on the mat.

Referring to Figure 5, in the case where the photographic mat is printed, the printed photographic mat 24 is placed on a surface 200, and the subject object 210 for which a 3D computer model is to be generated is placed on the photographic mat 24 so that the object 210 is surrounded by the features making up the pattern on the mat, and so that the part of the subject object which the user wishes to appear in the first image each time the 3D computer model is viewed faces the front marker 170. In the example shown in Figure 5, the front of the subject object 210 is positioned to face the front marker 170, although any desired part may be chosen to face the front

marker 170.

Preferably, the surface 200 is of a substantially uniform colour, which, if possible, is different to any colour in the subject object 210 so that, in input images, image data relating to the subject object 210 can be accurately distinguished from other image data.

Images of the subject object 210 and photographic mat 24 are recorded at different positions and orientations to show different parts of object 210 using a digital camera 16. In this embodiment, data defining the images recorded by camera 16 is input to customer processing apparatus 2,4 as a signal along wire 232.

More particularly, in this embodiment, camera 16 remains in a fixed position and photographic mat 24 with subject object 210 thereon is moved (translated) and rotated (for example in the direction of arrow 240) on surface 200, and photographs of the subject object 210 at different positions and orientations relative to the camera 16 are recorded. During the rotation and translation of the photographic mat 24 on surface 200, the subject object 210 does not move relative to the mat 24.

Figure 6 shows examples of images 300, 302, 304 and 306 defined in data input to the customer processing apparatus of the subject object 210 and photographic mat 24 in different positions and orientations relative to camera 16.

Referring again to Figure 4, at step S4-30, the customer processing apparatus receives data defining the recorded images from camera 16 showing the subject object on the photographic mat, and at step S4-32, sends the image data to the processing apparatus 6.

At step S4-34, processing apparatus 6 stores the image data received from the customer processing apparatus in memory 32, and at step S4-36, processes the image data to calculate the position and orientation of the camera 16 for each image.

More particularly, at step S4-36, camera position and orientation calculation 40 performs processing first to calculate the values of the intrinsic parameters of the camera 16 which recorded the images (that is, the aspect ratio, focal length, principal point, first order radial distortion coefficient and skew angle) in a conventional manner, for example as described in "Euclidean